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SUBSTITUTE CLAIMS

1. A film comprising a fluorine containing ethylene copolymer (FCEC) obtained by the copolymerization of ethylene with suitable fluorine-containing comonomer compounds, wherein the FCEC comprises from about 0.5 wt% to about 40 wt% of a fluorine-containing comonomer compound and from about 30 wt% to about 99.5 wt% ethylene, wherein:

(1) the fluorine-containing comonomers are fluorinated acrylate or methacrylate esters of the general formula: Cf-L-O-CO-CR=CH_2 , wherein:

(i) Cf is a fluorinated aliphatic group having at least 4 carbon atoms;

(ii) L is a linking group that connects the fluorinated aliphatic group with the (meth)acrylate group, selected from the group consisting of arylene, arylalkylene, sulfonyl, sulfoxy, sulfonamide, carboxyamino, carbonyloxy, urethanylene, and combinations thereof; and

(iii) R is H or CH_3 .

2. A fiber comprising a fluorine containing ethylene copolymer (FCEC) obtained by the copolymerization of ethylene with suitable fluorine-containing comonomer compounds, wherein the FCEC comprises from about 0.5 wt% to about 40 wt% of a fluorine-containing comonomer compound and from about 30 wt% to about 99.5 wt% ethylene, wherein:

(1) the fluorine-containing comonomers are fluorinated acrylate or methacrylate esters of the general formula: Cf-L-O-CO-CR=CH_2 , wherein:

(i) Cf is a fluorinated aliphatic group having at least 4 carbon atoms;

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(ii) L is a linking group that connects the fluorinated aliphatic group with the (meth)acrylate group, selected from the group consisting of arylene, arylalkylene, sulfonyl, sulfoxy, sulfonamide, carboxyamino, carbonyloxy, urethanylene, and combinations thereof ; and

(iii) R is H or CH₃; and wherein the fiber is obtained by a melt-blowing process.

3. An article having a composite or multilayer structure comprising an outer layer comprising: a fluorine containing ethylene copolymer (FCEC) obtained by the copolymerization of ethylene with suitable fluorine-containing comonomer compounds, wherein the FCEC comprises from about 0.5 wt% to about 40 wt% of a fluorine-containing comonomer compound and from about 30 wt% to about 99.5 wt% ethylene, wherein:

(1) the fluorine-containing comonomers are fluorinated acrylate or methacrylate esters of the general formula: Cf-L-O-CO-CR=CH₂, wherein:

(i) Cf is a fluorinated aliphatic group having at least 4 carbon atoms;

(ii) L is a linking group that connects the fluorinated aliphatic group with the (meth)acrylate group, selected from the group consisting of arylene, arylalkylene, sulfonyl, sulfoxy, sulfonamide, carboxyamino, carbonyloxy, urethanylene, and combinations thereof ; and

(iii) R is H or CH₃.

4. A microporous membrane comprising a fluorine containing ethylene copolymer (FCEC) obtained by the copolymerization of ethylene with suitable fluorine-containing comonomer compounds, wherein the FCEC

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comprises from about 0.5 wt% to about 40 wt% of a fluorine-containing comonomer compound and from about 30 wt% to about 99.5 wt% ethylene, wherein:

(1) the fluorine-containing comonomers are fluorinated acrylate or methacrylate esters of the general formula: $Cf-L-O-CO-CR=CH_2$, wherein:

(i) Cf is a fluorinated aliphatic group having at least 4 carbon atoms;

(ii) L is a linking group that connects the fluorinated aliphatic group with the (meth)acrylate group, selected from the group consisting of arylene, arylalkylene, sulfonyl, sulfoxy, sulfonamide, carboxyamino, carbonyloxy, urethanylene, and combinations thereof ; and

(iii) R is H or CH_3 ; and wherein the membrane is useful as protection against permeation of liquids through the membrane.

5. A flash spun plexifilamentary product comprising a fluorine containing ethylene copolymer (FCEC) obtained by the copolymerization of ethylene with suitable fluorine-containing comonomer compounds, wherein the FCEC comprises from about 0.5 wt% to about 40 wt% of a fluorine-containing comonomer compound and from about 30 wt% to about 99.5 wt% ethylene, wherein:

(1) the fluorine-containing comonomers are fluorinated acrylate or methacrylate esters of the general formula: $Cf-L-O-CO-CR=CH_2$, wherein:

(i) Cf is a fluorinated aliphatic group having at least 4 carbon atoms;

(ii) L is a linking group that connects the fluorinated aliphatic group with the (meth)acrylate group, selected from the group consisting of arylene, arylalkylene, sulfonyl, sulfoxy, sulfonamide,

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carboxyamino, carbonyloxy, urethanylene, and combinations thereof ; and

(iii) R is H or CH₃.

6. A melt spun fibrous article comprising a fluorine containing ethylene copolymer (FCEC) obtained by the copolymerization of ethylene with suitable fluorine-containing comonomer compounds, wherein the FCEC comprises from about 0.5 wt% to about 40 wt% of a fluorine-containing comonomer compound and from about fluorinated acrylate or methacrylate.

general formula: Cf-L-O-CO-CR=CH_2 , wherein:

(i) Cf is a fluorinated aliphatic group having at least 4 carbon atoms;

(ii) L is a linking group that connects the fluorinated aliphatic group with the (meth)acrylate group, selected from the group consisting of arylene, arylalkylene, sulfonyl, sulfoxy, sulfonamide, carboxyamino, carbonyloxy, urethanylene, and combinations thereof ; and

(iii) R is H or CH₃; and wherein the fibrous products are obtained by melt spinning or multicomponent fiber spinning a FCEC or a blend thereof.

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